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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/ Date: 11-05-2015

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to Defence Layout Roads in Ward No.09, Vidyaranyapura}

Ref.: Letter No. Testing/BUB/2015-16, dated 09-05-2015

Sample supplied to lab by: Sri.R.Harish, Contractor,
Bangalore.

Report required for: Assistant Executive Engineer,
Vidyaranyapura Sub-Division.
BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.30**	95-100
26.50	**---**	-
22.40	**74.00**	60-80
11.20	**47.30**	40-60
4.75	**36.00**	25-40
2.36	**25.00**	15-30
0.600	**18.4**	8-22
0.075	**4.00**	0-8

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**25.30 %**	Not more than 30 %
2	Impact Value	----,,----	**23.70 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

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11/05/2015
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BUB/CTE/2015-16/ **Date: 22-05-2015**

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements to Defence Layout Roads in Ward No.09, Vidyaranyapura}

Ref.: Letter No. Testing/BUB/2015-16, dated 20-05-2015

Sample supplied to lab by: Sri.R.Harish, Contractor,
Bangalore.

Report required for: Assistant Executive Engineer,
Vidyaranyapura Sub-Division.
BBMP, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.20 %**
2. **Gradation Test** :

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Spec—ifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**97.60**	90—100
4.75	**46.10**	35—51
2.36	**36.50**	24—39
1.18	**18.90**	15—30
0.3	**14.00**	09—19
0.075	**4.70**	03—08

* As furnished by Client.
The Results relate only to the items tested.

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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Date: 22-05-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.40%**	Not more than 30 %
2	Impact Value	----,,----	**25.20%**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----,,----	**0.40%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----,,----	**97.30%**	Minimum retained coating 95.0 %

*As Furnished by Client

The Results relate only to the items tested.

22/05/2015

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BUB/CTE/2015-16/ **Date: 07-05-2015**

1. TESTING OF FINE AGGREGATES:

Sub: Testing of Fine Aggregates.
{Project*: Improvements to Defence Layout Roads in Ward No.09, Vidyaranyapura}
Ref.: Letter No. Testing/BUB/2015-16, dated 02-05-2015
Sample supplied to lab by: Sri.R.Harish, Contractor,
Bangalore.
Report required for: Assistant Executive Engineer,
Vidyaranyapura Sub-Division.
BBMP, Bangalore.

TABLE - 1.1: SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.50	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	85.30	60-95	75-100	85-100	
01.18	74.00	30-70	55-90	75-100	
600. mic	43.60	15-34	35-59	60-79	
300.mic	18.50	5-20	8-30	12-40	
150.mic	2.90	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.44%	Not more than 8%
2.	Specific Gravity	----	2.61	-------

*As Furnished by Client.
The Results relate only to the items tested

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BUB/CTE/2015-16/ **Date: 11-05-2015**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to Defence Layout Roads in Ward No.09, Vidyaranyapura}
Ref.: Letter No. Testing/BUB/2015-16, dated 02-05-2015
Sample supplied to lab by: Sri.R.Harish, Contractor,
Bangalore.
Report required for: Assistant Executive Engineer,
Vidyaranyapura Sub-Division.
BBMP, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 03-05-2015 to 10-05-2015

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**160 min**	Shall not be less than 30 min
2	Final setting time	**275 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.60%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.50 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**29.20 N/ Sq mm** **41.60 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As Furnished by Client.
The Results relate only to the items tested

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